IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	
Lee, Eugene et al.	§	Examiner: Davis, Zachary A.
	§	
Serial No.: 09/931,088	§	Art Unit: 2137
	§	
Filed: August 15, 2001	§	
	§	
For: DATA SCRAMBLER	§	

Mail Stop Petitions
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNAVOIDABLE UNDER 37 C.F.R. § 1.137(A)

Dear Sirs:

Applicants, by their attorney of record, hereby petition the Commissioner to revive the above-identified application under the provision of 37 C.F.R. §1.137(a) on the grounds that the delay in replying to the Office Action mailed February 13, 2006, was unavoidable.

It is respectfully submitted that the entire delay in filing the required reply to the Notice of Non-Compliant Amendment (enclosed as Exhibit A) was unavoidable and that this petition has been promptly filed after Applicants became aware of the abandonment of the application. Accordingly, Applicants respectfully request that this Petition be granted and the application revived.

A Notification of Abandonment dated September 5, 2006 was received from the United States Patent and Trademark Office on September 7, 2006 (copy enclosed as Exhibit B). This Petition is being filed within one year of the date of abandonment.

The undersigned first became aware that the application may have become abandoned upon receiving a telephone call from the Examiner on August 28, 2006. Since that date, the undersigned has promptly attended to the filing of this Petition. Applicants also enclose a proper Response to the Notice of Non-Compliant Amendment (enclosed as Exhibit C).
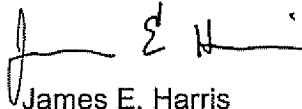
This Petition is accompanied by a petition fee set forth in 37 C.F.R. § 1.17(l) of $250.00. The undersigned submits to the Commissioner the following:

1.   On January 20, 2006, Applicants filed a Request for Continued Examination with Accompanying Amendment in response to an Office Action issued September 20, 2005.

2.   Examiner called Applicants on August 28, 2006, advising the response to the Notice of Non-Compliant Amendment was not received by the USPTO. Applicants reviewed the file and docket record and discovered the Notice of Non-Compliant Amendment was never received. At this time, Applicants informed the Examiner of non-receipt of the Notice.

3.   After filing of the Request for Continued Examination on January 20, the action was closed by our docketing department on January 23, 2006. The docket record (copy enclosed as Exhibit D) shows that we were then awaiting an action from the Patent Office.

4.   The Notice was not received by the undersigned prior to the deadline. Therefore, the failure to respond to the Notice of Non-Compliant Amendment was clearly unavoidable.

For all the above reasons, the Applicants respectfully request the Commissioner to find that the delay which resulted in this application was unavoidable and that this Petition was promptly filed after the Applicants became aware of the abandonment. The Applicants further request that the Commissioner grant this Petition and revive this application.

The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Haynes and Boone, LLP. Deposit Account No. 08-1394 associated with this communication.

Respectfully submitted,

James E. Harris
Registration No. 40,013

Date: 9/11/06
HAYNES AND BOONE, L.L.P.
901 Main Street, Suite 3100
Dallas, Texas 75202
Telephone: 512-867-8502
Facsimile: 214-200-0853

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,088	08/15/2001	Eugene W. Lee	3981-6	2875

27683	7590	02/13/2006	EXAMINER

HAYNES AND BOONE, LLP
901 MAIN STREET, SUITE 3100
DALLAS, TX 75202

ART UNIT	PAPER NUMBER

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

EXHIBIT

A

PENGAD 800-631-6989
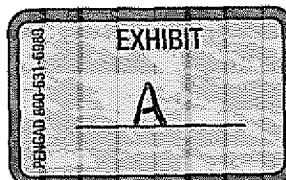
	Application No.	Applicant(s)
Notice of Non-Compliant Amendment (37 CFR 1.121)	09 / 931 088	
	Examiner	Art Unit	
	Z . Davis	2137	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

The amendment document filed on __01 - 23 -06__ is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

☐ 1. Amendments to the specification:
    ☐ A. Amended paragraph(s) do not include markings.
    ☐ B. New paragraph(s) should not be underlined.
    ☐ C. Other _____.

☐ 2. Abstract:
    ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
    ☐ B. Other _____.

☐ 3. Amendments to the drawings:
    ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
    ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
    ☐ C. Other _____.

☒ 4. Amendments to the claims:
    ☐ A. A complete listing of all of the claims is not present.
    ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
    ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
    ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
    ☒ E. Other: Claims 1-18 are not mentioned.

☐ 5. The amendment is unsigned or not signed in accordance with 37 CFR 1.4.

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714 and the USPTO website at http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/officeflyer.pdf .

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted within the time period set forth in the final Office action.

2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121 or 1.4, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action.

    Extensions of time are available under 37 CFR 1.136(a) <u>only</u> if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.
    Failure to timely respond to this notice will result in:
        Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or
        Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Brenda Harrison	571 - 272 - 3590
Legal Instruments Examiner (LIE)	Telephone No.

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,088	08/15/2001	Eugene W. Lee	3981-6	2875

27683   7590   09/05/2006

HAYNES AND BOONE, LLP
901 MAIN STREET, SUITE 3100
DALLAS, TX 75202

RECEIVED

SEP 07 2006

HAYNES AND BOONE

EXAMINER
DAVIS, ZACHARY A

ART UNIT	PAPER NUMBER
2137	

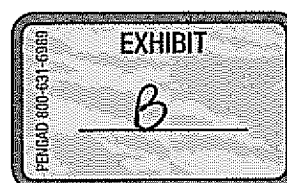DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

EXHIBIT

B

PENGAD 800-631-6989

DOCKETING COMPLETE
Date: 9/7/06
By:

PTO-90C (Rev. 10/03)

Notice of Abandonment	Application No.	Applicant(s)
	09/931,088	LEE ET AL.
	Examiner	Art Unit
	Zachary A. Davis	2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on *13 February 2006*.

    (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.

    (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.

    (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).

    (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).

    (d) ☒ No reply has been received.

2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).

    (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).

    (b) ☐ The submitted fee of $_____ is insufficient. A balance of $_____ is due.

        The issue fee required by 37 CFR 1.18 is $_____. The publication fee, if required by 37 CFR 1.18(d), is $_____.

    (c) ☐ The issue fee and publication fee, if applicable, has not been received.

3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).

    (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.

    (b) ☐ No corrected drawings have been received.

4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. ☒ The reason(s) below:

    Spoke to James Harris at (512) 867-8502 on 28 August 2006. Mr. Harris indicated no reply had been filed.

EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

	Application No.	Applicant(s)
Examiner-Initiated Interview Summary	09/931,088	LEE ET AL.
	Examiner	Art Unit
	Zachary A. Davis	2137

All Participants:

(1) _Zachary A. Davis_.

(2) _James Harris (Applicant's representative)_.

Status of Application: _Notice of Non-Compliant Amendment mailed after RCE_

(3) _____.

(4) _____.

Date of Interview: _28 August 2006_   **Time:** _____

Type of Interview:
☒ Telephonic
☐ Video Conference
☐ Personal (Copy given to: ☐ Applicant   ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes   ☒ No
  If Yes, provide a brief description: .

Part I.

Rejection(s) discussed:
_n/a_

Claims discussed:
_n/a_

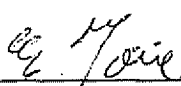Prior art documents discussed:
_n/a_

Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:

Examiner requested confirmation as to whether a response had been filed to the outstanding notice of non-compliant amendment mailed 13 February 2006. Mr. Harris indicated that no reply had been filed because the notice had not been received.

Part III.

☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.

☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

_____
(Examiner/SPE Signature)

_____
(Applicant/Applicant's Representative Signature – if appropriate)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	Docket No.: 35399.16
Eugene Lee	§	
	§	Customer No. 27683
Serial No.: 09/931,088	§	
	§	Group Art Unit: 2137
Filed: August 15, 2001	§	
	§	Examiner: Zachary Davis
For: Data Scrambler	§	

PRELIMINARY AMENDMENT

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office action of September 20, 2005, please consider the following:

Amendments to the Drawings are explained on page 2 of this paper and amended drawings are attached hereto;

Amendments to the Claims are provided in the listing of claims which begins on page 3 of this paper; and

Remarks/Arguments begin on page 6 of this paper.
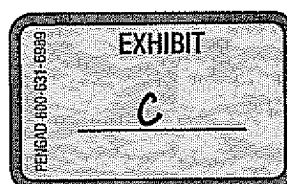
In the Drawings

Replacement sheets for figures 4 and 8 are submitted herewith, along with marked up copies for the Examiner's approval, showing the changes made to figures 4 and 8.

Listing of Claims:

1-18. (canceled).

19. (currently amended) A network processing device, comprising:

an ingress circuit configured to process packets received over a network;

an egress circuit configured to process packets for sending over the network;

a reconfigurable switch fabric for receiving ~~transferring~~ scrambled data at a first ~~between~~

~~a plurality of~~ switch fabric ~~ports~~ port and retransmitting the scrambled data, respectively, at at

least one switch fabric port selected from a second plurality of switch fabric ports;

a backplane coupled to the switch fabric ports; and

a first scrambler circuit configured to scramble a first parallel array of packet bits

received from the ingress circuit into a first array of scrambled output bits for sending over the

backplane to the first switch fabric port for switching across the switch fabric and retransmission

over the backplane from one of the second plurality of switch fabric ports towards the egress

circuit.

20. (previously presented) A network processing device according to claim 19 including a first

new seed register for storing the first array of scrambled output bits and supplying the first array

of scrambled output bits to the first scrambler circuit for applying to a second parallel array of

bits received from the ingress circuit.

21. (previously presented) A network processing device according to claim 20, further

comprising a second scrambler circuit and a second new seed register located in the egress

circuit for scrambling the packets processed by the egress circuit before sending those packets

over the network.

22. (currently amended) A network processing device according to claim 20, further comprising

a first de-scrambler circuit coupled to the egress circuit and the backplane and configured to

receive scrambled data over the backplane from the switch fabric, the scrambled data comprising

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the first array of scrambled output bits, and de-scramble the first array of scrambled output bits into a first array of descrambled packet bits.

23. (currently amended) A network processing device according to claim 22 including a first de-scrambler new seed register for storing the first array of de-scrambled packet bits and supplying the first array of de-scrambled ~~output~~ packet bits to the first de-scrambler circuit for applying to a second array of scrambled output bits received from the switch fabric.

24. (previously presented) A network processing device according to claim 23, further comprising a second de-scrambler circuit and a second de-scrambler new seed register located in the ingress circuit for descrambling arrays of scrambled bits received from the network.

25. (currently amended) A method for switching packet data between a plurality of network ports, comprising:

receiving packet data from a network;

scrambling a first parallel array of bits from the packet data into an array of first scrambled output bits;

~~transferring~~ transmitting the first scrambled output bits over a backplane to ~~through~~ a reconfigurable switch fabric;

retransmitting the first scrambled output bits over the backplane from the reconfigurable switch fabric; and

descrambling the first scrambled output bits after transferring the first scrambled output bits ~~through~~ from the reconfigurable switch fabric over the backplane.

26. (previously presented) A method according to claim 25 including storing the first scrambled output bits as new seed values for applying scramble polynomials to a second parallel array of bits from the packet data.

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27. (previously presented) A method according to claim 26 including selecting the new seed values according to scramble polynomial values, a bit length of the parallel arrays of bits, and a position of the individual bits in the parallel arrays of input bits.

28. (previously presented) A method according to claim 26 including using the stored first scrambled output bits to apply a 1 + X(39) + X(58) scramble polynomial to each one of the second parallel array of input bits.

29. (currently amended) A method according to claim 25 wherein descrambling the first scrambled output bits comprises:

receiving the first scrambled output bits;

storing an array of previously de-scrambled output bits; and

applying the array of previously de-scrambled output bits during descrambling of the first scrambled output bits to create first de-scrambled output bits.

30. (previously presented) A method according to claim 29 including storing the first de-scrambled output bits as new seed values for applying to a next group of scrambled output bits.

REMARKS

Claims 19-30 were pending and were finally rejected. Claims 19, 22, 23, 25, and 29 have been amended. Based on amendments to claims and the following remarks, Applicants respectfully request reconsideration of the application.

Amendments to the Drawings

The Office Action indicates several potential informalities in the drawings. First, the Office Action indicates that Figure 4 contains a misspelled label "Scambler Polynomial." Second, the Office Action indicates that Figure 8 contains incorrect flow directions between elements 104 and 112 and between elements 116 and 108. Applicants were able to locate the version of the drawings to which the Examiner was referring, and apologize for their confusion. Figures 4 and 8 have now been updated to address the informalities identified by the Examiner.

Response to 35 U.S.C. § 112 Rejections

Claims 23, 24, and 30 were rejected under 35 U.S.C. § 112 as being indefinite. Claim 23 was rejected for insufficient antecedent basis for the limitation "the first array of de-scrambled output bits" and has been amended to refer instead to the "first array of de-scrambled packet bits." There is now sufficient antecedent basis for the limitation and Applicants request the rejection of claim 23 be withdrawn.

Claim 24 was rejected due to its dependence on claim 23. Because there is now sufficient antecedent basis for the limitation in claim 23, Applicants request the rejection of claim 24 also be withdrawn.

Claim 30 was rejected for insufficient antecedent basis for the limitation "the first de-scrambled output bits." Claim 29 has been amended to positively recite "to create first de-scrambled output bits" and now provides sufficient antecedent basis for the limitation in claim 30. Applicants request the rejection of claim 30 be withdrawn.

Response to 35 U.S.C. § 103(a) Rejections

Claims 19-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (U.S. Patent No. 6,862,701) in view of Suemura (U.S. App. Pub. 2001/0008001). This rejection is respectfully traversed.

Claims 19, 22, and 25 have been amended to more clearly present what is claimed. Claims 19, 22, and 25 require that scrambled bits be transmitted across a backplane from the scrambler to the switch fabric and then transmitted again from the switch fabric back across the backplane, in keeping with the teachings shown in Figure 8 (see, e.g., text "scrambler for backplane connectivity"). The transfer of the scrambled bits to the switch fabric is supported also by the specification, which states "the scrambler circuit 114 scrambles the array of packet bits before they are output by the ingress buffer manager 112 to a switch fabric 120." (page 7, lines 25-27) The retransmission of the scrambled bits by the switch fabric back across the backplane is further supported by the specification teaching "Controllers 122 determine the egress ports where the switch fabric 120 transfers the scrambled bits." (page 8, lines 1-2.) No new matter has been added by this amendment.

The Examiner stated that Walker fails to disclose scrambling packet bits received from the ingress circuit or a switch fabric. The Examiner asserts, however, that Suemera scrambles output bits across a reconfigurable switch fabric for transferring scrambled data between a plurality of ports. Applicants' position is that the way in which Suemera operates neither teaches nor suggests the claim elements agreed as missing from Walker, as the claims are presently constituted. Accordingly, Applicants respectfully submit that the combination of Walker and Suemera is insufficient to create a *prima facie* case of obviousness for the amended claims.

Suemera uses an optical switch that optically routes signals from input fibers to output fibers. (Suemera, paragraph 28.) Due to this configuration, Suemera's input and output interfaces are re-paired every frame, and must be synchronized to each other at each re-pairing. (*Id.*) The input interfaces 2.0-2.3 perform electro/optical conversion of scrambled signals and the output interfaces 4.0-4.3 perform optical/electrical conversion of those signals. (*Id.*, paragraphs 64-65; *see also* Figures 3 and 6 for details of the interfaces.) The intervening optical switch merely routes photons from the input interfaces to the output interfaces. Thus in this respect Suemera adds nothing to Walker—each scrambled signal passes over a single

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communication link, albeit one that can be optically reconfigured between frames, before being descrambled.

Applicants could find no mention in Walker or Suemera of sending scrambled bits over a backplane and receiving them at a switch fabric port of a reconfigurable switch fabric for switching across the switch fabric, and then retransmitting the scrambled bits over the backplane from another switch fabric port, as required by claim 19. This infers that the switch fabric must maintain two separate switch fabric communication links, one coupled to the scrambler, and one coupled to the descrambler, across the backplane. This avoids the requirement of Suemera's optical approach that links be re-synchronized every frame, since the links across the backplane are links to the claimed switch fabric, not through a switch to each other. Note that Suemera does not teach receiving scrambled bits, transferring them, and retransmitting them—his optical switch merely routes light emanating from the ingress transmitters onto output fibers, with no attempt to receive or retransmit the bits represented by the photons.

Similar arguments apply to dependent claim 22, which adds the limitation of a descrambler that receives scrambled data over the backplane from the switch fabric—data that was received by the switch fabric from a scrambler communicating across a different backplane link. Likewise, method claim 25 also recites the two backplane transmissions.
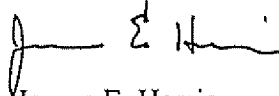
Applicants respectfully submit that Suemera and Walker, alone, or in combination, do not teach transferring bits "over the backplane" with a switch fabric as is claimed in claims 19, 22, and 25. Accordingly, Applicants request that the rejection of claims 19, 22, and 25 be withdrawn.

Claims 20-21, 23-24, and 26-30 are dependent claims that depend respectively from at least one of claims 19, 22, and 25. Based on the argument presented above for claims 19, 22, and 25, Applicants respectfully request that the rejection of claims 20-21, 23-24, and 26-30 also be withdrawn.

Conclusion

For the foregoing reasons, Applicants respectfully request allowance of claims 19-30 as presently constituted. The Examiner is encouraged to telephone the undersigned at 512.867.8502 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

James E. Harris
Reg. No. 40,013

Date: 9/11/06

HAYNES AND BOONE, LLP
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Dallas, Texas 75202-3789
Telephone: 512.867.8502
Facsimile: 512.867.8663
ipdocketing@haynesboone.com

R

SCAMBLER POLYNOMIAL
OF 1+X(39)+X(58)

```
Dout[0:38]=NS[38:0]^NS[57:19]^Din[0:38];
Dout(0)=NS(38)^NS(57)^Din(0);
Dout(1)=NS(37)^NS(56)^Din(1);
Dout(2)=NS(36)^NS(55)^Din(2);
Dout(3)=NS(35)^NS(54)^Din(3);
Dout(4)=NS(34)^NS(53)^Din(4);
Dout(5)=NS(33)^NS(52)^Din(5);
Dout(6)=NS(32)^NS(51)^Din(6);
Dout(7)=NS(31)^NS(50)^Din(7);
Dout(8)=NS(30)^NS(49)^Din(8);
Dout(9)=NS(29)^NS(48)^Din(9);
Dout(10)=NS(28)^NS(47)^Din(10);
Dout(11)=NS(27)^NS(46)^Din(11);
Dout(12)=NS(26)^NS(45)^Din(12);
Dout(13)=NS(25)^NS(44)^Din(13);
Dout(14)=NS(24)^NS(43)^Din(14);
Dout(15)=NS(23)^NS(42)^Din(15);
Dout(16)=NS(22)^NS(41)^Din(16);
Dout(17)=NS(21)^NS(40)^Din(17);
Dout(18)=NS(20)^NS(39)^Din(18);
Dout(19)=NS(19)^NS(38)^Din(19);
Dout(20)=NS(18)^NS(37)^Din(20);
Dout(21)=NS(17)^NS(36)^Din(21);
Dout(22)=NS(16)^NS(35)^Din(22);
Dout(23)=NS(15)^NS(34)^Din(23);
Dout(24)=NS(14)^NS(33)^Din(24);
Dout(25)=NS(13)^NS(32)^Din(25);
Dout(26)=NS(12)^NS(31)^Din(26);
Dout(27)=NS(11)^NS(30)^Din(27);
Dout(28)=NS(10)^NS(29)^Din(28);
Dout(29)=NS(9)^NS(28)^Din(29);
Dout(30)=NS(8)^NS(27)^Din(30);
Dout(31)=NS(7)^NS(26)^Din(31);
Dout(32)=NS(6)^NS(25)^Din(32);
Dout(33)=NS(5)^NS(24)^Din(33);
Dout(34)=NS(4)^NS(23)^Din(34);
Dout(35)=NS(3)^NS(22)^Din(35);
Dout(36)=NS(2)^NS(21)^Din(36);
Dout(37)=NS(1)^NS(20)^Din(37);
Dout(38)=NS(0)^NS(19)^Din(38);
```

FIG.4

NETWORK 100

INGRESS NETWORK PROCESSOR 102
DE—SCRAMBLER 106

EGRESS NETWORK PROCESSOR 108
SCRAMBLER 110

SCRAMBLER FOR NETWORK INTERFACE

INGRESS BUFFER MANAGER 112
SCRAMBLER 114

EGRESS BUFFER MANAGER 116
DE—SCRAMBLER 118

SCRAMBLER FOR BACK PLANE CONNECTIVITY

SWITCH FABRIC 120

CONTROLLER 122

99

FIG.8

SCRAMBLER POLYNOMIAL
OF 1+X(39)+X(58)

```
Dout[0:38]=NS[38:0]^NS[57:19]^Din[0:38];
Dout(0)=NS(38)^NS(57)^Din(0);
Dout(1)=NS(37)^NS(56)^Din(1);
Dout(2)=NS(36)^NS(55)^Din(2);
Dout(3)=NS(35)^NS(54)^Din(3);
Dout(4)=NS(34)^NS(53)^Din(4);
Dout(5)=NS(33)^NS(52)^Din(5);
Dout(6)=NS(32)^NS(51)^Din(6);
Dout(7)=NS(31)^NS(50)^Din(7);
Dout(8)=NS(30)^NS(49)^Din(8);
Dout(9)=NS(29)^NS(48)^Din(9);
Dout(10)=NS(28)^NS(47)^Din(10);
Dout(11)=NS(27)^NS(46)^Din(11);
Dout(12)=NS(26)^NS(45)^Din(12);
Dout(13)=NS(25)^NS(44)^Din(13);
Dout(14)=NS(24)^NS(43)^Din(14);
Dout(15)=NS(23)^NS(42)^Din(15);
Dout(16)=NS(22)^NS(41)^Din(16);
Dout(17)=NS(21)^NS(40)^Din(17);
Dout(18)=NS(20)^NS(39)^Din(18);
Dout(19)=NS(19)^NS(38)^Din(19);
Dout(20)=NS(18)^NS(37)^Din(20);
Dout(21)=NS(17)^NS(36)^Din(21);
Dout(22)=NS(16)^NS(35)^Din(22);
Dout(23)=NS(15)^NS(34)^Din(23);
Dout(24)=NS(14)^NS(33)^Din(24);
Dout(25)=NS(13)^NS(32)^Din(25);
Dout(26)=NS(12)^NS(31)^Din(26);
Dout(27)=NS(11)^NS(30)^Din(27);
Dout(28)=NS(10)^NS(29)^Din(28);
Dout(29)=NS(9)^NS(28)^Din(29);
Dout(30)=NS(8)^NS(27)^Din(30);
Dout(31)=NS(7)^NS(26)^Din(31);
Dout(32)=NS(6)^NS(25)^Din(32);
Dout(33)=NS(5)^NS(24)^Din(33);
Dout(34)=NS(4)^NS(23)^Din(34);
Dout(35)=NS(3)^NS(22)^Din(35);
Dout(36)=NS(2)^NS(21)^Din(36);
Dout(37)=NS(1)^NS(20)^Din(37);
Dout(38)=NS(0)^NS(19)^Din(38);
```
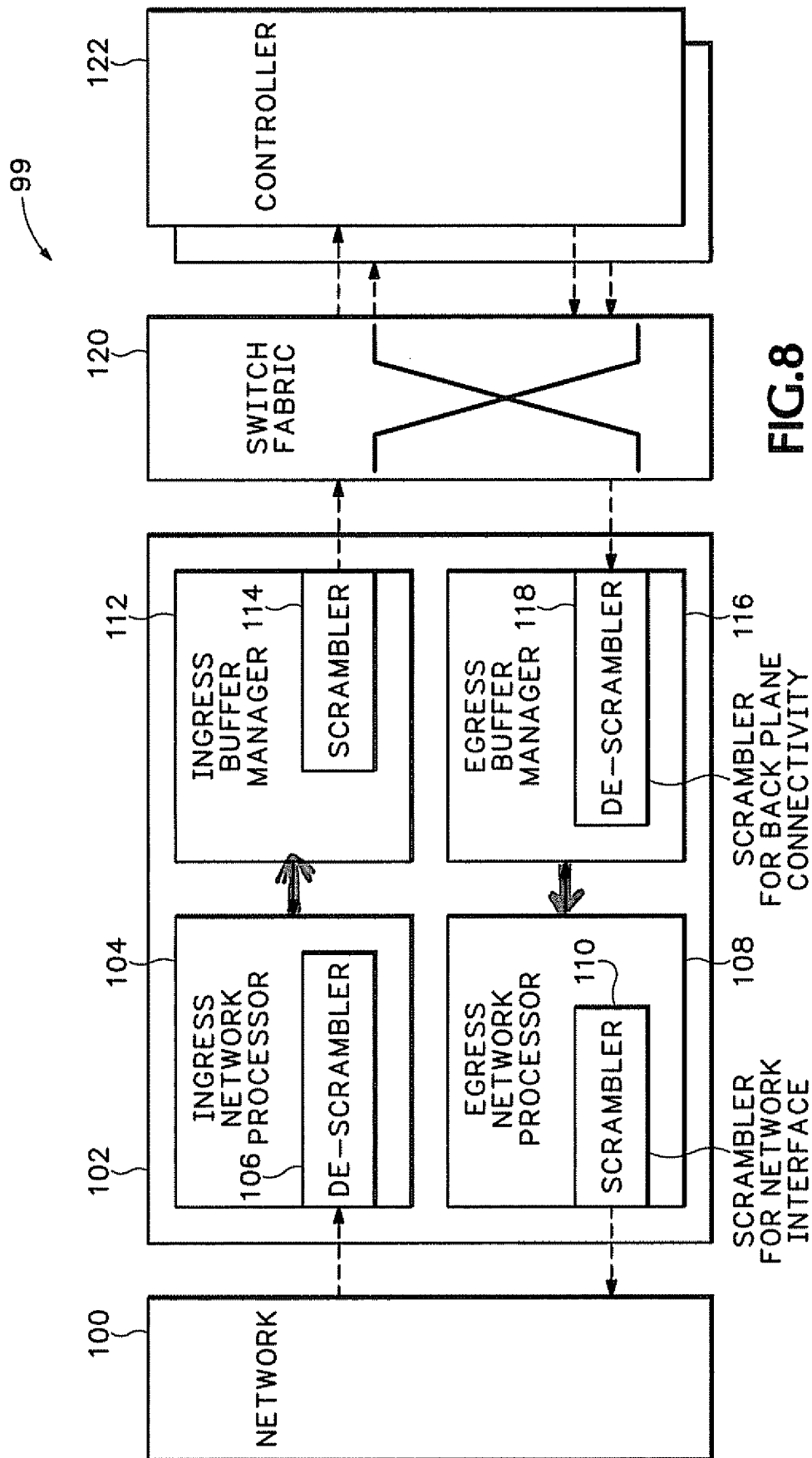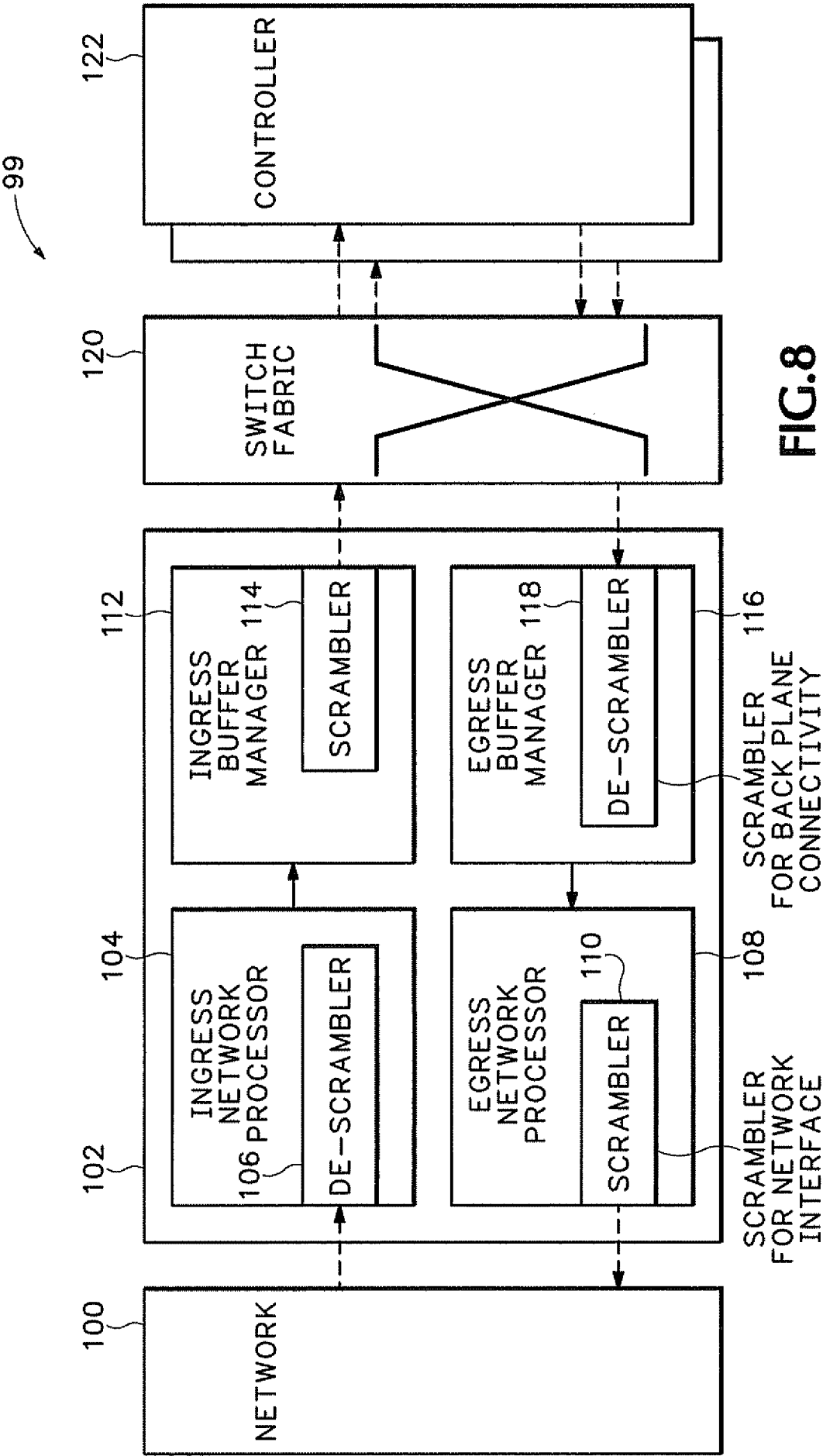
FIG.4

FIG.8

File Edit Records Utilities Tools Help

Docket Number	35399.00016		Attorney	J. R. Bell
Country	United States		Agent	
Case Type	Regular Case Type		Client\Division	Force10 Networks
Relation Type	Original Filing		Current Owner	Force10 Networks, Inc.
Filing Type	National Case		Previous Owner	
Filing Number				

Data Scrambler

Other Nos.	Related Id	Title	Text	Client Ref. #	Atty/Paralegal Notes
Filing Data	Related Party Info	Actions	Docket Notes	Expenses	Inventors

Action	Action Due Date	Deadline Date	Completed Date	Action Notes
Resp. Due - 1st O.A. (2 Mo. Extension)	9/8/2005	10/8/2005	7/8/2005	7/8/2005 -
Resp. Due - 1st O.A. (Final Dead Date)	10/8/2005	10/8/2005	7/8/2005	7/8/2005 -
Awtg Office Action	11/9/2005		9/23/2005	2nd OA
Resp. Due to Provoke Advisory Action	11/20/2005	3/20/2006	11/20/2005	11/20/2005 - Not
Final Rejection Due	12/20/2005	3/20/2006	1/23/2006	11/22/2005 - Awtg
Appeal Due	12/20/2005	3/20/2006	1/23/2006	11/22/2005 - Awtg
Final Rejection - 1st Extension	1/20/2006	3/20/2006	1/23/2006	11/22/2005 - Awtg.
Appeal Due (1st Extension)	1/20/2006	3/20/2006	1/23/2006	11/22/2005 - Awtg.
Final Rejection - 2nd Extension	2/20/2006	3/20/2006	1/23/2006	11/22/2005 - Awtg
Appeal Due (2nd Extension)	2/20/2006	3/20/2006	1/23/2006	11/22/2005 - Awtg
Awtg Post Card	2/20/2006		1/30/2006	1/20/2006 - RCE
Final Rejection Deadline	3/20/2006	3/20/2006	1/23/2006	11/22/2005 - Awtg.
Dead Date Notice of Appeal Due	3/20/2006	3/20/2006	1/23/2006	11/22/2005 - Awtg
Awtg Office Action	5/20/2006			1/20/2006 - RCE
*				

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